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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,647	07/01/2004	Shigeru Sugaya	SONYJP 3.3-1050	2859

530 7590 08/18/2010  
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EXAMINER
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ANDREWS, LEON T

ART UNIT	PAPER NUMBER
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2462

MAIL DATE	DELIVERY MODE
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08/18/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/500,647	<b>Applicant(s)</b> SUGAYA, SHIGERU	
	<b>Examiner</b> LEON ANDREWS	<b>Art Unit</b> 2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 7/27/2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***RCE***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 27, 2010 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-30** are being rejected under 35 U.S.C. 103(a) as being unpatentable by Nakada (Patent No.: US 7,133,387 B2) in view of Rakib et al. (Pub. No.: US 2001/0046266 A1), Kondo (Patent Number: 5,881,055) and Feng et al. (Patent No.: US 7,099,380 B1).

**Regarding Claim 1**, Nakada discloses a wireless communication system operating without a base station and including (Fig. 16, wireless system network apparatus, column 1, line 46; transmission and reception of a packet when apparatus A transmits data to apparatus B which shares the media with apparatus A, column 1, lines 54-56) a plurality of communication apparatuses (Figs. 1A and 1B, mobile communications system with communication terminals 2, 3 and 4, column 3, lines 40-42) associated with respective communication areas, the system comprising:

an information transmission source communication apparatus (Fig. 6, 44, transmission unit) for forming a data packet by inserting a preamble signal into each transmission data (transmission unit 44 modulates packets with a preamble and data generated by the signal unit, column 1, lines 41-44) and transmitting the formed data packet to a receiving destination communication apparatus (transmission unit 44 modulates packets with a preamble and data and the packets are transmitted and received by the communication terminal 30, column 1, lines 41-48) over a transmission path (Fig. 5, access channel (RACH)), the receiving destination communication apparatus being one of the communication apparatuses (Fig. 3, communication terminals 2, 3, 4) that are located within the communication area of the transmission source communication apparatus (Fig. 3, base station),

wherein a preamble signal is inserted in each transmission packet transmitted between the transmission source communication apparatus and the receiving destination communication apparatus so as to be integral with each transmission data (transmission unit 44 modulates packets with a preamble and data, and the packets are transmitted and received by the

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communication terminal 30, column 1, lines 41-48), wherein said transmission packet being at least one of a beacon signal, a data packet (transmitted packets with data, column 1, lines 41-44), an acknowledgment packet (Figs. 3, 5, ACK), a negative acknowledgment packet (Fig. 3, NACK), a transmission request packet (transmitted packets with preamble and data, column 1, lines 41-44), and a confirmation notice packet, wherein said transmission packet contains error detection information for header information in said transmission packet, wherein said beacon signal and data packet contain error detection information for payload information in respective beacon signal and data packet; and at least one of the plurality of a communication apparatuses (Fig. 1A, terminal 2) not currently communicating (message part and acknowledgement are given for terminal 3 which transmitted preamble 6 but not to terminal 2, column 4, lines 61-66) for recognizing that the transmission path (Fig. 5, RACH, random access channel) is used for a predetermined interval (prescribed delay time period of the preamble signal, column 4, lines 36-37) by the transmission source communication apparatus and the receiving destination communication apparatus from a time (time period of the preamble signal, column 4, lines 36-37) when a preamble signal is detected from a transmission packet is detected (transmission unit 44 modulates packets with a preamble and data generated by the signal unit, column 1, lines 41-44).

Nakada fails to disclose a communication system without a base station and a preamble signal inserted in transmission packet so as to be integral with each transmission data.

But, Rakib et al. discloses bidirectional communication system having a central unit transmitter and a remote unit receiver, paragraph [0016], page 2, lines 1-77, and preamble data

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(signal) must be inserted into every data to correct for the phase and amplitude (be integral with) of the signals (transmission data) for that timeslot, paragraph [0311], page 29, lines 10-13.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Rakib et al.'s limitation communication system without a base station and a preamble signal inserted in transmission packet so as to be integral with each transmission data because this would have allowed the central unit to receive downstream data and the remote unit to receive local carrier signal, paragraph [0016], page 2, lines 3-9, and, the insertion of preamble data (signal) into every data (transmission data) and for the correction of (be integral with) the carrier signal for that timeslot [0311], page 29, lines 10-13.

The combination Nakada and Rakib et al. fails to disclose a beacon signal and the beacon signal and data packet contain error detection.

But, Kondo discloses the beacon in Fig. 3B, column 14, line 6, judging the packet (payload) receiving errors when the communication apparatus receives the packet data and detect error in the transmission of the beacon, columns 14, 15, lines 59-65, 1-2.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Kondo's limitation because this would have allowed the transmission of the beacon, column 15, line 2.

And, the combination Nakada, Rakib et al. and Kondo fails to disclose error detection for header.

But, Feng et al. discloses header includes error detection, column 6, lines 59-60.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Feng et al.'s limitation because this would have allowed the header in a packet with a preamble and known data to include a method for error detection, column 6, lines 45-46, 59-60.

Further, the combination Nakada, Rakib et al. and Feng et al. fails to disclose an apparatus not currently communicating recognizing that the transmission path is used for an interval.

But, Komdo discloses communication between wireless communication apparatuses where the base station controlling a time when the information can be received and operated only during the receivable period of outputting signals to the communicating apparatuses, column 1, lines 41-54.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Kondo's limitation because this would have allowed the communication to the wireless communication apparatuses to be an intermittent receiving operation only during the data receivable period, column 1, lines 41-43, 53-54.

**Regarding Claim 2**, Nakada discloses the wireless communication system as claimed in claim 1, wherein

the information transmission source communication apparatus forms the data packet at a predetermined time unit (Fig. 2, 16, delay memory unit), and further comprising:

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an information reception target communication apparatus (Fig. 2, 15, code generation unit 15) for generating acknowledge (ACK) information in response to the success in correctly receiving the data and for generating not acknowledge (NACK) information (Fig. 2, 15, code generation unit 15 generates ACK signal or NACK signal on the basis of the output from the preamble determination unit 14, column 4, lines 32-34; Fig. 3) in response to a failure in correctly receiving the data (Fig. 2, 14, preamble determination unit 14 determines whether a preamble was received or not (failure), column 4, lines 23-24), forms an ACK (Fig. 3, ACK signal 8 for allowing to use the message part is transmitted for preamble signal 6, column 4, lines 65-66) or NACK packet to which a preamble signal is inserted, and returns it, just after the reception of the data packet (Fig. 3, S26, message part available at terminal 3, column 4, line 67);

said information transmission source communication apparatus retransmits the data packet of said predetermined time unit in response to the reception of the NACK packet (Fig. 3, NACK signal 7 for rejecting to use the message part is transmitted for preamble signal 5 at terminal 2, column 5, lines 1-2); and

said communication apparatus not currently communicating recognizes a use of the transmission path for retransmission (terminal 3 which is allowed to use the message part can now transmit and receive data, column 5, line 4-6) based on the reception of the preamble signal for a period (time period of the preamble signal, column 4, lines 36-37) from the detection of the NACK packet to detection of the next ACK packet.

**Regarding Claim 3**, Nakada discloses the wireless communication system as claimed in claim 2, wherein



other communication apparatuses not currently communicating (Fig. 3, terminal 3) recognize the termination of the use of the transmission path (Fig. 3, S26, message part available) when the ACK packet cannot be detected (Fig. 3, ACK 11) based on the detection of the preamble signal (Fig. 5, 28, preamble signal) until a predetermined elapsed time (prescribed delay time period of the preamble signal for NACK, column 4, lines 36-37) from when the NACK packet is received (Fig. 3, NACK 12).

**Regarding Claim 4**, Nakada discloses the wireless communication system as claimed in claim 2, wherein

the information reception target communication apparatus adds the preamble signal to a top (control signal of which the header designates a base station, column 1, lines 24-25) of a beacon signal (base station transmits a free channel signal (beacon signal) for allowing the mobile station to transmit the control signal and an identifier for the base station, column 1, lines 25-27) describing information regarding a communication apparatus (mobile station, column 1, line 23) of which transmission is permitted with priority (data items from the communications terminals are determined and priorities are setup, column 1, lines 38-40), and transmits the beacon signal;

the communication apparatus specified by the beacon signal transmits a predetermined unit of data packet (data items from the communication terminals are determined and two-step priorities are set up on the basis of the determination result, column 1, lines 38-40) when there is data to be transmitted to said information reception target apparatus; and

other communication apparatuses (Fig.3, terminal 4) not currently communicating recognize based on the detection of the preamble signal the use of the transmission path for the time interval (prescribed delay time period of the preamble signal, column 4, lines 36-37) corresponding to the packet length (communication terminal 30 receives the down stream standard signal which is as long as the preamble, column 1, lines 45-49) from when said beacon signal is received.

**Regarding Claim 5**, Nakada discloses the wireless communication system as claimed in claim 2, wherein

said information transmission source communication apparatus transmits a transmission request packet (RTS) into which the preamble signal is inserted when no preamble signal is detected for a predetermined time interval (prescribed delay time period of the preamble signal, column 4, lines 36-37); and

said information reception target communication apparatus returns a confirmation notice packet (CTS) (data packet is confirmed, column 1, line 36) in response to the reception of a transmission request packet (RTS) (packet with preamble and data is modulated by a short period, column 1, lines 64-65).

**Regarding Claim 6**, Nakada discloses the wireless communication system as claimed in claim 5, wherein

said other communication apparatus not currently communicating recognizes based on the detection of the preamble signal the use of the transmission path from when the NACK

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packet is detected (Fig. 3, NACK 12), during a predetermined interval (Fig. 3, interval between NACK 12 and ACK 11) from the reception of the confirmation notice (CTS) packet (data packet is confirmed, column 1, line 36), to when the next ACK packet is detected (Fig. 3, ACK 11).

**Regarding Claim 7**, Nakada discloses the wireless communication system as claimed in claim 5, wherein

said information source communication apparatus makes the data packet include therein an element (channel number for a data packet, column 1, lines 35-36) of the transmission request (RTS) for a next data packet transmission (channel allocation is controlled and data items are determined for competitive (transmitting) terminals, column 1, lines 36-39) when transmission data exists.

**Regarding Claim 8**, Nakada discloses the wireless communication system as claimed in claim 5, wherein

said information reception target communication apparatus makes the ACK packet (Fig. 3, ACK 11) or the NACK packet corresponding to the received data packet include an element of confirmation notice (CTS) (data packet is confirmed, column 1, line 36).

**Regarding Claims 9 and 20** Nakada discloses a wireless communication apparatus (Figs. 1A and 1B, terminals 2, 3, 4) and method (method for channel access, column 1, lines 7-8) operating within a communication system not having a base station (Fig. 16, wireless system network apparatus, column 1, line 46; transmission and reception of a packet when apparatus A transmits

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data to apparatus B which shares the media with apparatus A, column 1, lines 54-56) and including a plurality of communication apparatuses (Figs. 1A and 1B, mobile communications system with communication terminals 2, 3 and 4, column 3, lines 40-42) associated with respective communication areas, comprising:

buffer unit (Fig. 2, 16, delay memory unit) for dividing transmission data by a predetermined unit (Fig. 2, 14, preamble determination unit for determining whether or not to transmit signals, column 3, lines 3-5);

transmission data processing unit (Fig. 2, 13, correlation unit) for adding a predetermined preamble signal (calculates correlations between prescribed preamble signals, column 4, lines 6-8) to divided transmission data from the buffer unit to form a transmission packet (preamble packets and data generated by downstream signal generation unit 45, column 1, lines 42-44),

wherein said transmission packet being at least one of a beacon signal, a data packet (transmitted packets with data, column 1, lines 41-44), an acknowledgment packet (Figs. 3, 5, ACK), a negative acknowledgment packet (Fig. 3, NACK), a transmission request packet (transmitted packets with preamble and data, column 1, lines 41-44), and a confirmation notice packet, wherein said transmission packet contains error detection information for header information in said transmission packet, wherein said beacon signal and data packet contain error detection information for payload information in respective beacon signal and data packet;

preamble detection unit (Fig. 2, 14) for detecting a preamble signal (determines whether a preamble was received, column 4, line 23-24) on a transmission path (Fig. 5, RACH, random access channel); and

transmission unit (Fig. 6, 44) for transmitting the formed packet when no preamble signal is detected for a predetermined interval (prescribed delay time period of the preamble signal, column 4, lines 36-37) at said preamble detection unit, the formed packet being transmitted over a transmission path to one or more communication apparatuses (Figs. 1A and 1B, terminals 2, 3, 4) within the communication area of the communication apparatus transmitting the packet,

whereby at least one of the plurality of communication apparatuses (Fig. 1A, terminal 2) not currently communicating (message part and acknowledgement are given for terminal 3 which transmitted preamble 6 but not to terminal 2, column 4, lines 61-66) recognizes that the transmission path (Fig. 5, RACH, random access channel) is used for a predetermined interval by another communication apparatus from a time (time period of the preamble signal, column 4, lines 36-37) when a preamble signal from the transmission packet is detected (transmission unit 44 modulates packets with a preamble and data generated by the signal unit, column 1, lines 41-44).

Nakada fails to disclose a communication system without a base station and a preamble signal inserted in transmission packet so as to be integral with each transmission data.

But, Rakib et al. discloses bidirectional communication system having a central unit transmitter and a remote unit receiver, paragraph [0016], page 2, lines 1-77, and preamble data (signal) must be inserted into every data to correct for the phase and amplitude (be integral with) of the signals (transmission data) for that timeslot, paragraph [0311], page 29, lines 10-13.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Rakib et al.'s limitation communication system without a base station and a preamble signal inserted in transmission packet so as to be integral with each

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transmission data because this would have allowed the central unit to receive downstream data and the remote unit to receive local carrier signal, paragraph [0016], page 2, lines 3-9, and, the insertion of preamble data (signal) into every data (transmission data) and for the correction of (be integral with) the carrier signal for that timeslot [0311], page 29, lines 10-13.

The combination Nakada and Rakib et al. fails to disclose a beacon signal and the beacon signal and data packet contain error detection.

But, Kondo discloses the beacon in Fig. 3B, column 14, line 6, judging the packet (payload) receiving errors when the communication apparatus receives the packet data and detect error in the transmission of the beacon, columns 14, 15, lines 59-65, 1-2.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Kondo's limitation because this would have allowed the transmission of the beacon, column 15, line 2.

And, the combination Nakada, Rakib et al. and Kondo fails to disclose error detection for header.

But, Feng et al. discloses header includes error detection, column 6, lines 59-60.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Feng et al.'s limitation because this would have allowed the header in a packet with a preamble and known data to include a method for error detection, column 6, lines 45-46, 59-60.

Further, the combination Nakada, Rakib et al. and Feng et al. fails to disclose an apparatus not currently communicating recognizing that the transmission path is used for an interval.

But, Kondo discloses communication between wireless communication apparatuses where the base station controlling a time when the information can be received and operated only during the receivable period of outputting signals to the communicating apparatuses, column 1, lines 41-54.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Kondo's limitation because this would have allowed the communication to the wireless communication apparatuses to be an intermittent receiving operation only during the data receivable period, column 1, lines 41-43, 53-54.

**Regarding Claims 10 and 21**, Nakada discloses the wireless communication apparatus and method, further comprising:

reception unit (Fig. 6, 33, receiving unit) for receiving a signal added to the preamble signal (preamble signal and transmission data, column 2, lines 65-66) in response to the detection of the preamble signal; and

reception data processing unit (Fig. 3, base station 1) for analyzing the signal (transmitter/receiver in the base station analyses the signal sequence of the preamble, column 3, lines 59-62) received by said reception unit.

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**Regarding Claims 11 and 22**, Nakada discloses the wireless communication apparatus and method, wherein

said reception data processing unit generates acknowledge (ACK) information (Fig. 3, ACK 8) in response to correctly receiving a for-own-station data (transmission data, column 2, line 66) and not acknowledge (NACK) information (Fig. 3, NAK 7) in response to incorrectly receiving the for-own-station data;

said transmission data processing unit forms an ACK packet (Fig. 3, ACK 11) or an NACK packet (Fig. 3, NACK 12) into which a preamble signal (preamble signal, column 2, line 65) is inserted; and

said transmission unit transmits the ACK packet (Fig. 3, ACK 11) or the NACK packet (Fig. 3, NACK 12) just after the reception of the data.

**Regarding Claims 12 and 23**, Nakada discloses the wireless communication apparatus and method, wherein

upon not currently communicating (the base station stops transmitting knowing immediately that the mobile station is in its zone, column 1, lines 29-31), said reception data processing unit recognizes use of the transmission path for the data retransmission from when the NACK packet is detected to when the next ACK packet is detected (Fig. 3, ACK 11).

**Regarding Claims 13 and 24**, Nakada discloses the wireless communication apparatus and method, wherein



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said reception data processing unit recognizes a termination of use (the base station stops transmitting knowing immediately that the mobile station is in its zone, column 1, lines 29-31) of the transmission path when no ACK packet (Fig. 3, ACK 11) is detected until a predetermined interval (prescribed delay time period of the preamble signal for NACK, column 4, lines 36-37) has elapsed from when the NACK packet (Fig. 3, NACK 12) is received.

**Regarding Claims 14 and 25**, Nakada discloses the wireless communication apparatus and method, wherein

said transmission data processing unit generates a beacon signal (base station transmits a free channel signal (beacon signal) for allowing the mobile station to transmit the control signal and an identifier for the base station, column 1, lines 25-27) describing information regarding a communication apparatus (mobile station, column 1, line 23) from which transmission is permitted with priority (data items from the communications terminals are determined and priorities are setup, column 1, lines 38-40); and

said reception data processing unit analyzes (transmitter/receiver in the base station analyses the signal sequence of the preamble, column 3, lines 59-62) whether the transmission of its own station (preamble signal and transmission data, column 2, lines 65-66) is permitted with priority by analyzing (transmitter/receiver in the base station analyses the signal sequence of the preamble, column 3, lines 59-62) the beacon signal.

**Regarding Claims 15 and 26**, Nakada discloses the wireless communication apparatus and method, wherein

upon not currently communicating (the base station stops transmitting knowing immediately that the mobile station is in its zone, column 1, lines 29-31), said reception data processing unit recognizes use of a transmission path (Fig. 5, RACH) for a time interval (prescribed delay time period of the preamble signal, column 4, lines 36-37) corresponding to the packet length (communication terminal 30 receives the down stream standard signal which is as long as the preamble, column 1, lines 45-49) from when the beacon signal is received.

**Regarding Claims 16 and 27**, Nakada discloses the wireless communication apparatus and method, wherein

said transmission data processing unit generates a transmission request (RTS) packet (packet with preamble and data is modulated by a short period, column 1, lines 64-65) for a data transmission target (Fig.3, terminal 4);

and in response to reception of the transmission request (RTS) packet from another communication apparatus (Fig.3, terminal 4) by said reception processing unit, said transmission data processing unit generates a confirmation notice (CTS) packet (data packet is confirmed, column 1, line 36).

**Regarding Claims 17 and 28**, Nakada discloses the wireless communication apparatus and method, wherein

upon not currently communicating (the base station stops transmitting knowing immediately that the mobile station is in its zone, column 1, lines 29-31), said reception data processing unit recognizes use of a transmission path (Fig. 5, RACH) from when a not

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acknowledge (NACK) packet (Fig. 3, NACK 12) is detected, during a predetermined interval (prescribed delay time period of the preamble signal, column 4, lines 36-37) from the reception of the confirmation notice (CTS) packet (data packet is confirmed, column 1, line 36), to when a next acknowledge (ACK) packet (Fig. 3, ACK 11) is detected.

**Regarding Claims 18 and 29**, Nakada discloses the wireless communication apparatus and method, wherein

said transmission data processing unit makes the data packet include therein an element (channel number for a data packet, column 1, lines 35-36) of the transmission request (RTS) for a next data packet transmission (channel allocation is controlled and data items are determined for competitive (transmitting) terminals, column 1, lines 36-39) when a following transmission data (transmission data, column 2, line 66) exists.

**Regarding Claims 19 and 30**, Nakada discloses the wireless communication apparatus and method, characterized in that:

said transmission data processing unit makes an acknowledge (ACK) packet (Fig. 3, ACK 11) or a not acknowledge (NACK) packet (Fig. 3, NACK 12) corresponding to the received data packet include an element (channel number for a data packet, column 1, lines 35-36) of the confirmation notice (CTS) (data packet is confirmed, column 1, line 36) therein.

### ***Response to Arguments***

3. Applicant's arguments filed July 27, 2010 have been considered as follows:

- In the remarks on page 15 of the amendment, applicant contends that neither Nakada, Rakib et al. nor Brown et al. alone or in combination teach the wherein a preamble signal is inserted in each transmission packet transmitted between the transmission source communication apparatus and the receiving destination communication apparatus so as to be integral with each transmission data, wherein said transmission packet being at least one of a beacon signal, a data packet, an acknowledgment packet, a negative acknowledgment packet, a transmission request packet, and a confirmation notice packet, wherein said transmission packet contains error detection information for header information in said transmission packet, wherein said beacon signal and data packet contain error detection information for payload information in respective beacon signal and data packet; and at least one of the plurality of a communication apparatuses not currently communicating for recognizing that the transmission path is used for a predetermined interval by the transmission source communication apparatus and the receiving destination communication apparatus from a time when a preamble signal is detected from a transmission packet is detected. Further, applicant contends that Rakib et al. does not teach preamble signal is inserted in each transmission packet transmitted between the transmission source communication apparatus and the destination communication apparatus.

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- The examiner respectfully contends that since applicant has amended the claims, Brown et al. is no longer used an art rejection in the prosecution of the claim limitation. Instead, examiner contends that Nakada, Rakib et al., Kondo and Feng et al. are used in the prosecution of the current claim limitation, and response to applicant's arguments is presented in the office action as prosecuted. Further, Rakib et al. discloses bidirectional communication system having a central unit transmitter and a remote unit receiver, paragraph [0016], page 2, lines 1-77, and preamble data (signal) must be inserted into every data to correct for the phase and amplitude (be integral with) of the signals (transmission data) for that timeslot, paragraph [0311], page 29, lines 10-13. Additionally, Nakada discloses transmission unit 44 modulates packets with a preamble and data, and the packets are transmitted and received by the communication terminal 30, column 1, lines 41-48.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Andrews whose telephone number is (571) 270-1801. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rao S. Seema can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LA/la  
August 12, 2010

/Donald L Mills/  
Primary Examiner, Art Unit 2462